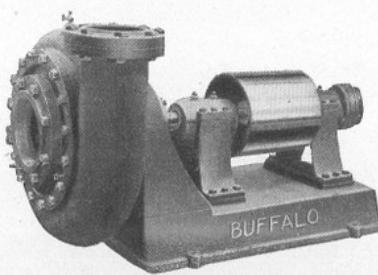


BUFFALO

Paper Stock Pumps



Paper Stock Pump

Bulletin 953

Buffalo Steam Pump Company

BUFFALO, N. Y., U. S. A.

New York
Boston
Philadelphia
Pittsburgh

Cleveland
Detroit
Chicago
St. Louis
Los Angeles

New Orleans
Atlanta
Minneapolis
Denver

Canadian Blower & Forge Co., Ltd.
Kitchener, Ont., Canada

Toronto Montreal Calgary Vancouver St. John.

Buffalo Paper Stock Pumps

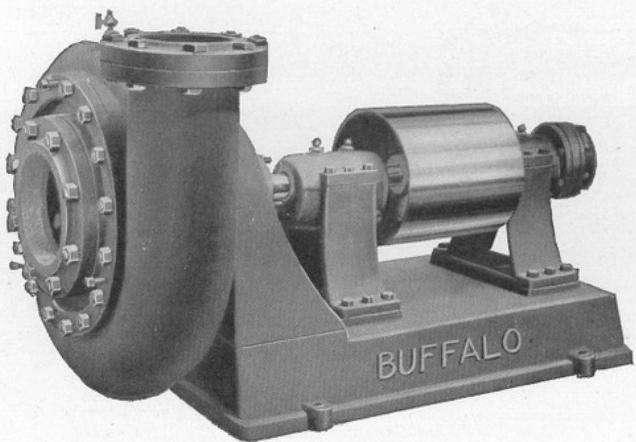


Fig. 940

Buffalo Paper Stock Pumps are primarily designed to handle ground wood stock and are not offered for use on rag stock.

These pumps are regularly furnished with a specially designed enclosed impeller as shown in Fig. 939. Many tests and reports from actual installations show that pumps equipped with this type of impeller do not clog even when handling heavy stock, and much

higher efficiency can be obtained than with the open type impeller.

There are cases and conditions of service, however, that sometimes require the open impeller pump, and Buffalo Paper Stock Pumps are so designed that they can be furnished with either the enclosed or open impeller. We cannot offer as high efficiencies with the open impeller as with the closed—but in most installations where the open impeller is required, efficiency is not of prime importance.

Buffalo Paper Stock Pumps are of heavy duty design. They do not heat under continued service. They maintain their high efficiency and repair expense is very low. Shells may be swivelled to give any position of discharge wanted.

Characteristics of these pumps allow them to be direct connected to motors without danger of overloading and speeds are such that standard motors can be used.

Pumping efficiency varies with the size of pump, capacity being handled, head against which the pump is operating, percentage of stock, and type of impeller being used. With a small pump, low head and thick stock, efficiency will be about 35%. This will run as high as 45% with thin stock and 50% to 55% with thin stock and higher heads. For larger pumps with fairly high head and thin stock we have many tests showing efficiency as high as 65% to 70%.

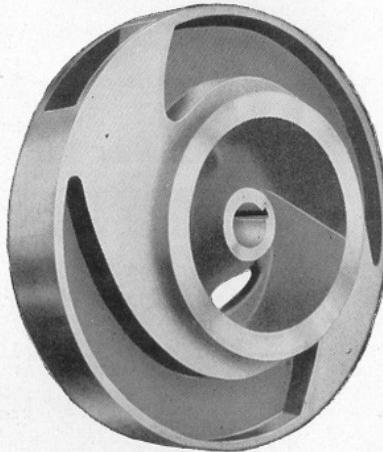


Fig. 939

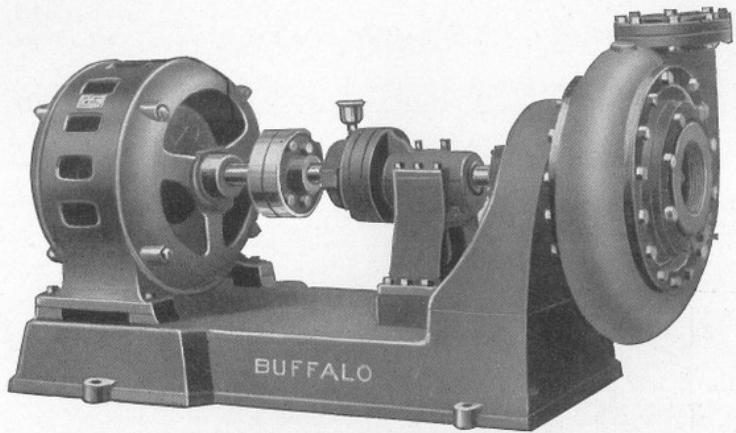


Fig. 941

fraction of 1% up to 4%. Some mills report success with even 5% and 6% stock but we recommend not more than 4%. These pumps are also used extensively for handling white water, and we also have many successful installations in Beet Sugar Factories.

1% Ground Wood Stock contains .083 lbs. stock per gallon

2%	"	"	"	"	.166	"	"	"	"
3%	"	"	"	"	.25	"	"	"	"
4%	"	"	"	"	.33	"	"	"	"

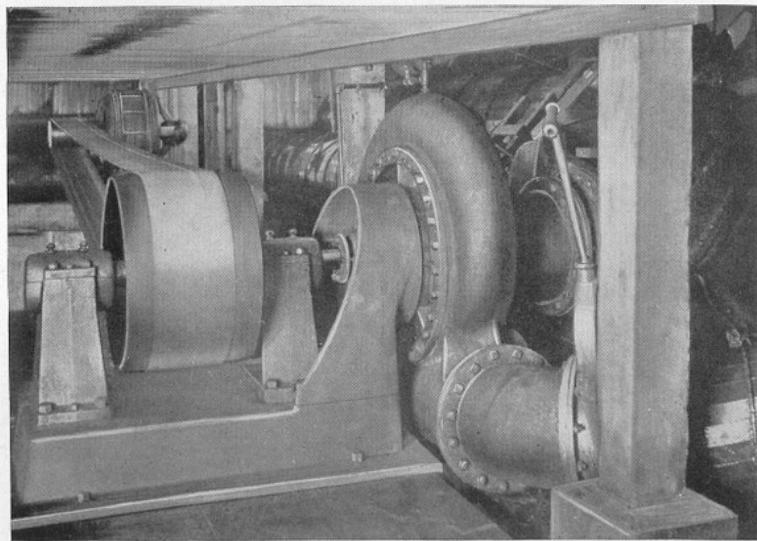
Capacity rating in gallons for the various size pumps as published in the tabular list of sizes, is recommended as maximum for not exceeding about 2% stock. If the stock is thicker, it must be handled at a lower velocity. In other words, use next size larger pump, which when operated at a somewhat slower speed will handle the required capacity of thicker stock. On 2½ to 4% stock it is desirable to reduce the ratings on the pumps from 30 to 50% of their maximum capacity as listed for thin stock to secure best results.

Extreme care must be taken in estimating total pumping head where there is much piping, as pipe friction increases very rapidly, where stock is being handled.

Efficiencies mentioned are for pumps equipped with our standard Enclosed Type Impeller.

Pumps with the Open Type Impeller will be about 5% to 8% less efficient.

Buffalo Paper Stock Pumps are operating satisfactorily in many Paper Mills handling ground wood stock varying from a



Construction of these pumps is clearly shown by the sectional view herewith. When pump is direct connected to electric motor, the trust bearing is located on the pedestal bearing between pump and flanged coupling.

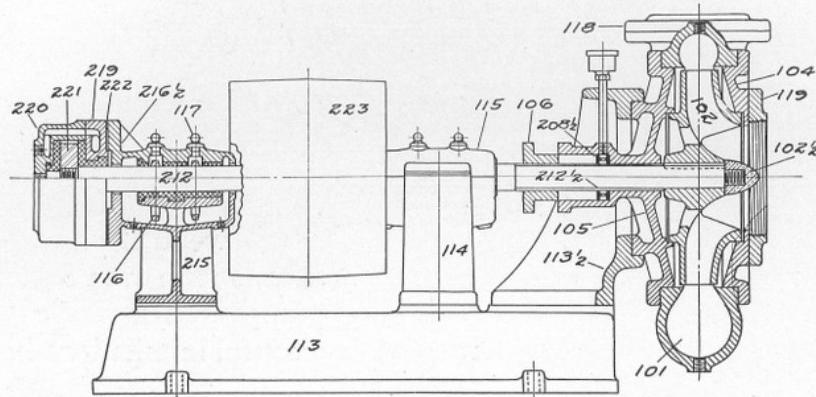


Fig. 982
Sectional View of Paper Stock Pump

101	Shell.	222	Adjusting Shims.
102	Impeller.	113	Base.
102½	Impeller Nut.	113½	Hood.
208½	Grease Ring.	114	Inboard Bearing Stand.
212	Shaft.	115	Inboard Bearing Cap.
212½	Shaft Sleeve.	215	Outboard Bearing Stand.
104	Suction Side Plate.	216½	Outboard Bearing Cap.
105	Stuff. Box Side Plate.	116	Oil Ring.
106	Shaft Gland.	117	Oil Plug.
219	Thrust Bearing.	118	Discharge Flange.
220	Thrust Cover.	119	Suction Flange.
221	Thrust Plate.	223	Pulley.

SPEED TABLE FOR FIG. 940 PAPER STOCK PUMPS

Size of Pump, Inches	Gallons per Minute	R. P. M. for Total Pumping Heads, 10' to 100'																		
		10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	60'	65'	70'	75'	80'	85'	90'	95'	100'
4	500	700	775	850	920	980	1050	1100	1185	1220	1270	1320	1370	1410	1460	1495	1530	1560	1590	1620
5	700	460	525	590	650	700	750	800	845	885	920	955	990	1015	1045	1070	1090	1110	1135	1150
6	1000	440	500	570	630	680	735	780	825	865	905	940	970	1000	1030	1050	1075	1100	1120	1135
8	1800	380	430	480	520	570	600	640	675	705	735	760	785	805	825	845	860	880	890	900
10	2800	350	400	440	480	520	560	595	630	660	690	715	735	760	775	790	800	810	815	820
12	4000	310	350	390	430	465	500	530	560	590	615	640	660	680	700	710	720	730	740	750

Above speeds are for the capacity shown in second column, and are for belted pumps which are provided with maximum diameter impellers to give minimum speeds. Direct connected pumps may be operated at somewhat higher speeds by using special impellers.

Buffalo Paper Stock Pumps

100 ft. maximum working pressure

Casing and Side Plates:

Cast Iron, machined to gauge, drilled to template.

Impeller:

Cast Iron. Specially designed enclosed type. Open type where required, on special order.

Shaft:

Steel, brass covered through pump and stuffing boxes only.

Shaft

Bearings:

Ring-oiling. Bearing surfaces of genuine babbitt metal peined and scraped. Oil gauges furnished on bearings.

Thrust Bearing:

Marine collar type mounted on outboard pedestal bearing on pulley pumps and on pedestal bearing between pump and motor on motor driven pumps. Provided with water cooling connections for emergency use.

Stuffing Boxes:

Extra deep.

Glands:

Cast Iron, allowing ample packing space.

Sub-Base:

Cast Iron, ribbed and stiffened.

Coupling:

Flanged. Flexible type cannot be furnished.

Finish:

All pumps painted, filled and rubbed down. Bright parts exposed to weather protected by slushing compound.

Fittings:

Oil cups, drain and air cocks.

Code Word Regular Fitted, Pulley Driven	Figure Number	Size Pump, Inches	Pipe Sizes, Inches		Normal Capacity, Gallons per Minute	Size Pulley, Inches		Approximate Floor Space, Pulley Pump, Inches
			Suction	Discharge		Diameter	Face	
MKECS	940	4	5	4	500	12	10	41 x 24
MKEGH	940	5	6	5	700	15	12	56 x 30
MKEHT	940	6	8	6	1000	15	12	56 x 30
MKEJN	940	8	10	8	1800	18	12	63 x 36
MKEIP	940	10	12	10	2800	20	12	70 x 41
MKEMD	940	12	14	12	4000	22	16	72 x 44

Add Code Word JCESF for Brass Impeller.

Add Code Word JCHBY for Brass Gland.

Add Code Word JCWAF for Motor Brase and Flanged Coupling.

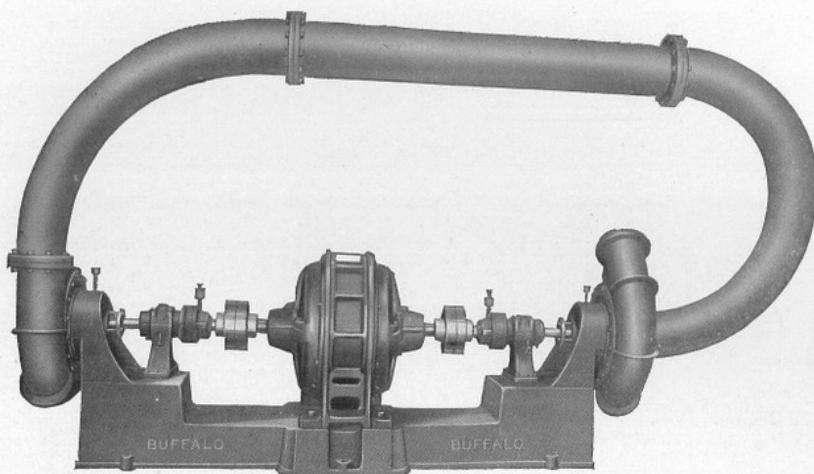


Fig. 979

Head conditions or available speed sometimes require a two stage pump. This construction can be furnished in any size.

Figure 979 shows an 8 inch two stage Paper Stock Pump.

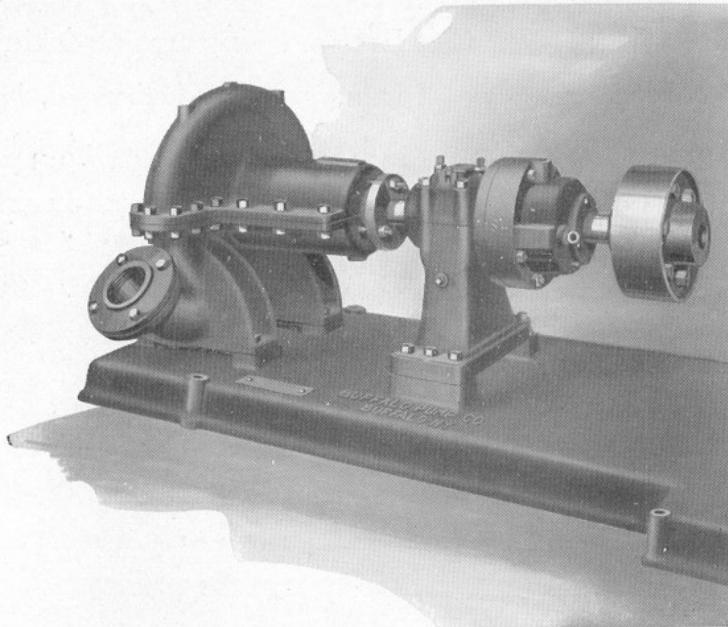


Fig. 992

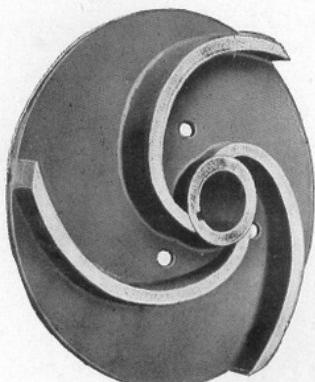


Fig. 1203

Buffalo Paper Stock Pumps can also be used for handling sewage, and for this work we use a special open type of sewage impeller as shown in Fig. 1203. Data as to speeds, efficiencies, etc., for this service, will be furnished on request.

Buffalo engineers are ready to co-operate with you in solving your troublesome Pumping Problems.

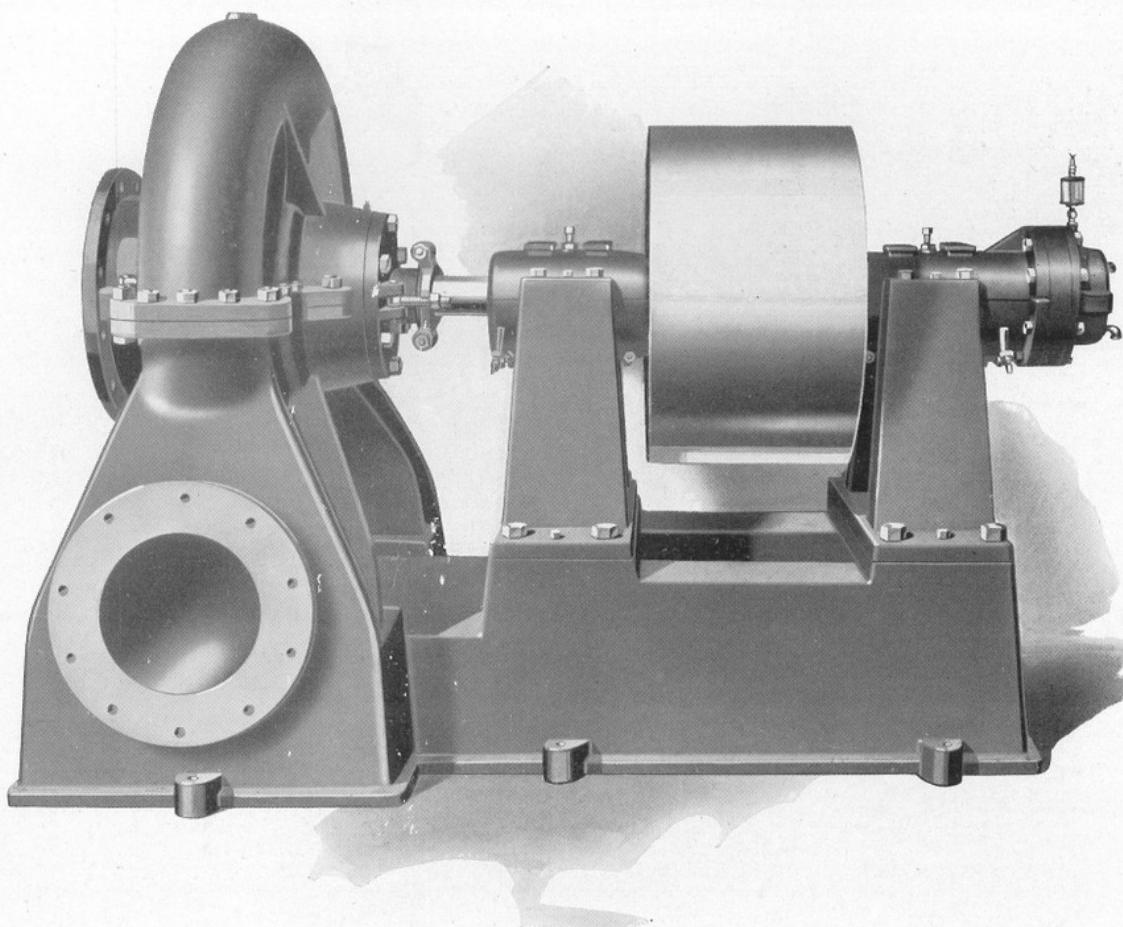


Fig. 960

Buffalo Divided Shell Paper Stock Pumps can be furnished with closed or open impellers. Speeds and efficiencies are the same as for the solid shell type.

To remove the upper half of the shell, it is not necessary to touch the discharge at all. Simply remove the bolts in the upper half of the suction flange and the upper half of the shell can be taken off and the impeller and shaft lifted out.

Stuffing Boxes are split and water cooled, greatly prolonging the life of packing.

Discharge opening can be furnished at an angle 45 degrees up from the horizontal if desired.

The "BUFFALO" line includes

STEAM PUMPS
VACUUM PUMPS
CONDENSERS
POWER PUMPS
CENTRIFUGAL PUMPS

"BUFFALO" pumps are used extensively for

Acid Plants
Bilge and Drainage
Boiler Feeding
Chemical Plants
General Water Supply
Heating Systems
Irrigation Projects
Marine Service
Mine Drainage
Paper and Pulp Mills
Reclamation Projects
Sewage Disposal

SCANNED BY: AEM OF LOCKPORT NY USA

POSTED ON: SEPTEMBER 27, 2016

EDITED BY: BRIAN D. SZAFRANSKI
ELMA, NEW YORK USA

COURTESY OF: WESTERN NY GAS & STEAM ENGINE ASSOCIATION

ALEXANDER NEW YORK USA
WWW.ALEXANDERSTEAMSHOW.COM

Page 8 **NOTE:** ORIGINAL DOCUMENT HAD WATER DAMAGE